UNIVERSITÉ CÔTE D'AZUR

ÉCOLE UNIVERSITAIRE DE RECHERCHE
SYSTÈMES NUMÉRIQUES POUR L'HUMAIN

TUTORSHIPS AND MULTIDISCIPLINARY PROJECTS

Research Projects Guide

2023/2024

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FRANCE 2030

The tutorships and multidisciplinary projects of the Digital Systems for Humans Graduate School are an excellent opportunity for students to discover the world of research.

Every semester, DS4H Graduate School offers students a range of research projects in the field of digital sciences in two formats: individual tutorships research projects and multidisciplinary team research projects.

These projects are designed to provide a concrete and enriching research experience alongside high-level researchers in our affiliated laboratories, where the technologies and digital practices of tomorrow are being developed.

Research projects allow students to distinguish themselves by acquiring practical knowledge and skills that will be valuable regardless of their career choices.

For any question regarding the minors and projects offered by DS4H Graduate School:

✉ **ds4h-pedagogie@univ-cotedazur.fr**

Important!
This document only presents research projects (tutorships and multidisciplinary).
For other types of projects, explore our website.

General information

- A tutorship / a multidisciplinary research project corresponds to a minimum of 91 hours per semester (one day per week for a period of 8 weeks + one full week of immersion).
- Most tutorships/multidisciplinary research projects grant 6 ECTS credits.
- Students usually work on DS4H research projects (tutorships and multidisciplinary) on Fridays because that day is often left open for that purpose in their course schedule. But they can choose another day of the week, if their supervisor agrees.
- Students must check that they are available for the immersion week and make sure that their supervisor is also available.
- Students must make themselves available to attend any additional sessions organized in context with the research project throughout the semester.
- If the student and the supervisor wish to do so, it is entirely possible to continue the same tutorship/multidisciplinary research project for one or two additional semester(s), or even to undertake the master's final internship on the same topic (subject to not exceeding the regulatory maximum number of hours. Please contact us for more details).

Two formats of research projects

RESEARCH PROJECTS IN TUTORSHIP

> A tutorship is equivalent to a laboratory internship. You work closely with your mentor, who is an experienced researcher.

- Tutorships are open to M1 and M2 students.
- Doctoral students are encouraged to propose subjects and to supervise students in tutorships.
- Learning outcomes:
    - Professional immersion in the laboratory.
    - Deepening of knowledge on the chosen research topic.
    - Contribution to the development of new knowledge.
    - The ideal stepping stone towards pursuing a doctoral thesis.

MULTIDISCIPLINARY RESEARCH PROJECTS

> Multidisciplinary projects emphasize teamwork. Each student brings their discipline's perspective to the group to address a common issue.

- These projects are open to M1 and M2 students.
- Each student participating in a multidisciplinary project has a supervisor from his or her own discipline.
- Doctoral students are encouraged to propose subjects and to supervise students in multidisciplinary projects..
- Learning outcomes:
    - Professional exposure where everyone's expertise combines to generate innovative solutions to real-world complex challenges.
    - In addition to the development of disciplinary skills, there is also the development of transferable skills in project management, communication, peer cooperation, teamwork, planning, leadership, and more.

The different steps

of a tutorship/multidisciplinary research project

Before starting ..... p. 6

1. Kickoff meeting ..... p. 6
2. Wishes selection ..... p. 6
3. Student/supervisor meeting ..... p. 7
4. Choice and approval of the project ..... p. 7
5. Project framing and paperwork ..... p. 8

During the project ..... p. 9

1. Workload ..... p .9
2. Welcome meeting ..... p. 9
3. Mid-term meeting ..... p. 9
4. "How to become an effective communicator" course ..... p. 10
5. Oral defense practice session ..... p. 10

End of the project p.11

1. Final written report ..... p. 11
2. Final Oral defense ..... p. 12
3. Reflexive session ..... p. 13

Appendix: grading of research projects ..... p. 14

Important!
All project stages (meetings, courses, required documents, deliverables, etc.) are mandatory.

Before starting

1. Kickoff meeting

- At the beginning of each semester (fall and spring), research topics available are presented at the DS4H kickoff meeting (check your @etu-univ-cotedazur.fr mailbox). The meeting is also the opportunity for students to meet the supervisors, explore the different topics and prepare their option wishes (minors and projects).
- Students are given a complete and precise overview of all the topics available each semester. Attendance is therefore mandatory.
- Not all students have access to the different minors and DS4H projects for a given semester.
- DS4H Minors and projects may be optional or mandatory depending on your curriculum.

2. Wishes selection

Following the kickoff meeting, Master's students concerned have a few days to submit their DS4H project wishes (one project, combining all tutorships and multidisciplinary projects) on the Erebe platform. https://ds4h.univ-cotedazur.eu/erebe

- Following the kickoff meeting, Master's students concerned have a few days to submit their DS4H project wishes (one project, combining all tutorships and multidisciplinary projects) on the Erebe platform. https://ds4h.univ-cotedazur.eu/erebe
- Note: students enter their minor wishes on the same platform at the same time.

Important!
Students who do not wish to select a minor or complete a DS4H project must confirm this on the EREBE platform.

3. Student/supervisor meeting

- After submitting his/her wishes, the student must immediately contact the supervisor(s) of the selected project to organize a meeting in person or by phone.
- This first student/supervisor meeting is designed to help students gain a more practical understanding of the project topic and help the supervisor determine how motivated and skilled the students are for the project.

4. Confirmation and approval of the project

- Following this first student/supervisor meeting, the student confirms or withdraws his/her application for the project and **the supervisor approves or refuses the application**. At this stage, the confirmation of the student's acceptance or rejection for the project must be sent to the email address ds4h-pedagogie@univ-cotedazur.fr.
    - The, the student's training program coordinator approves or refuses the student's application and confirms the requirements if necessary. These information must be sent to the email address ds4h-pedagogie@univ-cotedazur.fr as well.

Important!
Applications for multidisciplinary projects can only be accepted if at least one student applies for each of the disciplines involved.

5. Project framing and paperwork

The student must provide mandatory documents for the establishment of an agreement (in the case of a mentoring project) and a learning agreement (in the case of a multidisciplinary project).

Without a "convention" or learning agreement,
a tutorship or a multidisciplinary project cannot begin.

Mandatory Documents

to be provided upon the validation of your project application

and at the latest October 1st (Fall semester) or February 15th (Spring semester)

Send these documents to ds4h-pedagogie@univ-cotedazur.fr

Type of project	Documents to be provided
Tutorship	• Health insurance certificate (*attestation assurance maladie*) • Civil liability insurance (*attestation responsabilité civile*) • Student card • Student ID card with updated sticker • Precise address of the location(s) where the tutorship will take place • Name of the service/team in the hosting laboratory • Name of the tutor • Subject number and title of the tutorship (as indicated on Erebe)
Tutorship and multidisciplinary project	**Semester schedule specifying:** • **The dates chosen to work on the project** over a period of at least 8 weeks (usually Friday or another day if agreed by student and supervisor). • **The dates chosen for the project immersion week** (i.e. **5 full and consecutive days** to work on the project during which the supervisor will be available as much as possible to help the student). This schedule must be validated by the project's tutor/supervisor and the student's training program coordinator.

Once all the required documents have been properly sent to ds4h-pedagogie@univ-cotedazur.fr, the convention or learning agreement can be established. Research projects only start once this step has been finalized.

Important!
Students: use your email address @etu.univ-cotedazur.fr

During the project

1. Workload

A research project (tutorship or multidisciplinary project) corresponds to a minimum of 91 hours per semester including:

- The **immersion week**, i.e. 5 full and consecutive days to work on the project (in the laboratory for a tutorship) during which the supervisor will be available as much as possible to help the student).

- **One day per week over a period of at least 8 weeks** (usually Friday or another day on which the student and supervisor agree).

2. Welcome meeting

- A welcome meeting is organized by Anne-Laure Simonelli for all students conducting a research project (tutorship or multidisciplinary projet), regardless of their curriculum.
- The organization of the semester is presented to them, and all questions are addressed.

3. Mid-term meeting

- A meeting is organized by the supervisor and the student after five to seven days of work on the project. The date of the meeting is communicated to Anne-Laure Simonelli, who may possibly attend.

- Following this meeting, the student writes a summary report (2 pages maximum) with the help of the supervisor.
    - The report should mention any problems encountered so that solutions can be found and implemented if necessary.
    - The report is reviewed by the supervisor, then uploaded on Moodle one week after the mid-term meeting at the latest.
    - **The report is graded by Anne-Laure Simonelli. The evaluation grid is included in the appendix.**

4. “How to become an effective communicator” course

- This course is organized and taught by Anne-Laure Simonelli.
- As part of the course assignment, students must give a two-minute speech (maximum) on a non-scientific subject.
- Students who are unable to attend can upload video-recorded speech on Moodle.
- **Speeches or videos are graded by Anne-Laure Simonelli. The evaluation grid is included in the appendix.**

5. Oral defense practice session

- A practice session for the final oral defense is usually organized a week before the defense date to give students the opportunity to practice speaking in public and improve the presentation of their results and project.

- Anne-Laure Simonelli is in charge of this practice session. Doctoral students are also invited to attend and provide constructive feedback in an informal atmosphere.

- During the session, students present their research project in progress, i.e. in its state at the time of the session, with the support of a visual presentation.

- Students who are unable to attend the practice session can upload their video-recorded presentation rehearsal on Moodle.

- **Presentations rehearsal or videos are graded by Anne-Laure Simonelli. The evaluation grid is included in the appendix.**

End of project

1. Final written report

- Attention! M1 Computer Science (Informatique) students must write the final report in English. Other students can choose to write it either in French or English.
- After completing their research project, all students must write a final written report, which requirements vary depending on the type of project (tutorship or multidisciplinary project):

Research Project's type	Final written report requirements
Tutorship	Short 10 to 15-page paper (excluding references) including an abstract, an introduction (presentation of the context, state of the art), the materials and methods used, the results obtained, a discussion and a conclusion.
Multidisciplinary project	Short 25-page paper excluding references (its length can vary depending on the number of disciplines involved in the project) including an abstract, an introduction (presentation of the context, state of the art), the materials and methods used, the results obtained, a discussion and a conclusion. The introduction and the conclusion are written jointly by the different students, each writing from the perspective of their discipline. For the "materials and methods", "results" and "discussion" parts, the students of the different disciplines involved write a paragraph for each of these parts highlighting what their discipline has contributed to the multidisciplinary project.

- The students send a draft of their report to their supervisor no later than one week before the final deadline. Supervisors are responsible for helping the students in their discipline by giving them constructive feedback on their draft.
- The final written report is submitted by students on Moodle.
- **The final report is graded by the head of the study program (or, in the case of a multidisciplinary project, by the head of the program in each discipline represented) or by a competent person appointed by the head of the study program. The evaluation grid of the final written report is included in the appendix.**
- The head of the study program must send the grade to Anne-Laure Simonelli before the deadline.

2. Final oral defense

- Final oral defense can be conducted in either French or English, as preferred.
- Attention! M1 Computer Science (Informatique) students must orally present their work in English for at least one semester.
- After completing their research project, all students must give an oral defense, which requirements vary depending on the type of project (tutorship or multidisciplinary project):

Research Project's type	Final oral defense requirements
Tutorship	Length: 15 min + 10 min of questions.
Multidisciplinary project	Length: about 5 min to present the context + 10 min of presentation per discipline + 5 min of conclusion + a total of 5 min of questions per student. The context is presented jointly by the different students of the different disciplines. Then, each student presents what his or her discipline has contributed to the multidisciplinary project (materials and methods, results and discussion). The final conclusion is presented jointly by the different students of the different disciplines.

- The final defense is open to all students who have completed a tutorship or a multidisciplinary project, to the supervisors, the head of the study program and DS4H members.
- The jury is made up of the head(s) of the study program (or the person appointed by the head of the program) + DS4H member(s)
- The jury takes into account the answers given to all questions including those from the public (and not exclusively questions from the jury).
- **The jury grades the oral defense (an individual grade for each student in the case of a multidisciplinary project). The evaluation grid of the final oral defense is included in the appendix.**

3. Feedback session – Reflexive essay

- Towards the end of the project, a meeting with all the students involved in a research project (tutorship or multidisciplinary project) is organized and led by Anne-Laure Simonelli.
- The purpose of this session is to give students the opportunity to share their experience with the other students and identify the new skills they have learned.
- Following the feedback session, each student submits on Moodle an essay (2 pages maximum): "Reflect on your learning and evaluate the development of your interpersonal skills".
- **This essay is graded by Anne-Laure Simonelli. The evaluation grid is included in the appendix.**

Appendix
Grading of research projects

Each stage of the tutorships and multidisciplinary projects is graded and contributes to the final score:

- **Mid-term meeting (4,5% of the final grade)**
- **2-min oral communication (2% of the final grade)**
- **Oral rehearsal's presentation (3,5% of the final grade)**
- **Final written report (31,5% of the final grade)**
- **Final oral defense (29,5% of the final grade)**
- **Reflexive essay (3,5% of the final grade)**
- **Supervisor grade (25,5% of the final grade)**

Evaluation grids are detailed in the following pages.

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Projet de recherche – Grille d'évaluation

Student Research Project Evaluation grid

Réunion de suivi

Mid-term meeting

(4,5% de la note finale / of the total final grade)

Date	
Student's Name	
Curriculum	
Final grade	**/ 20**
Appreciation	
Key strengths	
Quality to maintain	
Areas to develop	

Réunion de suivi Mid-term meeting	Insufficient	Weak	Rather Weak	Average	Pretty good	Good	Excellent
Compliance with instructions							
Context / State of the art of the research topic in progress, i.e. at the time of writing							
Description of student accomplishments during the first part of the research project							
Description of remaining work during the 2nd part with deadlines							
	0 to 4	5 to 7	8 to 9	10	11 to 12	13 to 15	16 to 20
Evaluation							

UNIVERSITÉ CÔTE D'AZUR | ÉCOLE UNIVERSITAIRE DE RECHERCHE SYSTÈMES NUMÉRIQUES POUR L'HUMAIN

Projet de recherche – Grille d'évaluation

Student Research Project Evaluation grid

Communication orale de 2 min

2 min oral communication

(2% de la note finale / of the total final grade)

Date	
Student's Name	
Curriculum	
Final grade	**/ 20**
Appreciation	
Key strengths	
Quality to maintain	
Areas to develop	

Communi-cation orale de 2 min 2 min oral communication	***Insufficient***	***Weak***	***Rather Weak***	***Average***	***Pretty good***	***Good***	***Excellent***
Compliance with instructions							
Introduction Informative, brief and catchy							
Content of slides, creativity							
Enthusiasm and Dynamism							
Conclusion							
	0 to 4	**5 to 7**	**8 to 9**	**10**	**11 to 12**	**13 to 15**	**16 to 20**
Evaluation							

UNIVERSITÉ CÔTE D'AZUR | ÉCOLE UNIVERSITAIRE DE RECHERCHE SYSTÈMES NUMÉRIQUES POUR L'HUMAIN

Projet de recherche – Grille d'évaluation

Student Research Project Evaluation grid

Répétition de la présentation orale

Oral Rehearsals Presentation

(3,5% de la note finale / of the total final grade)

Date	
Student's Name	
Grades	
DS4H Jury Grade	
PhD Grade	
Final grade	**/ 20**
Appreciation	
Key strengths	
Quality to maintain	
Areas to develop	

Répétition de la présentation orale Oral Rehearsals Presentation	***Insufficient***	***Weak***	***Rather Weak***	***Average***	***Pretty good***	***Good***	***Excellent***
Speaking skills in general							
Good time management							
Enthusiasm of the speaker							
Well-supported thesis							
Consideration for the audience							
Effective delivery and transitions							
Structure							
Presentation of a pertinent outline							
Compliance with the required structure							
Media							
Content of slides							
Creativity							
List of references							
Scientific content							
Quality of the presentation of the topic (context / state of the art)							
Relevance of the method(s) chosen to address the topic							
Quality of the presentation of results, quality of the description (visuals: graphs, photos, articles, etc)							
Quality of the discussion							
Quality of the conclusion							
Questions							
Enthusiasm, Curiosity							
Quality of the intellectual process leading to the answer							
Pertinent answers							
Competency in holding a scientific discussion							
	0 to 4	**5 to 7**	**8 to 9**	**10**	**11 to 12**	**13 to 15**	**16 to 20**
Evaluation							

UNIVERSITÉ CÔTE D'AZUR | ÉCOLE UNIVERSITAIRE DE RECHERCHE SYSTÈMES NUMÉRIQUES POUR L'HUMAIN

Projet de recherche – Grille d'évaluation

Student Research Project Evaluation grid

Rapport écrit final

Final Written Report

(31,5% de la note finale / of the total final grade)

Date	
Student's Name	
Program Responsible Grade	**/ 20**
Appreciation	
Key strengths	
Quality to maintain	
Areas to develop	

Rapport écrit final Final Written Report	***Insufficient***	***Weak***	***Rather Weak***	***Average***	***Pretty good***	***Good***	***Excellent***
Presentation (first page)							
Precise, concise and pertinent title of the research project							
Personal information (name, student ID, master's degree, discipline)							
Name(s) of supervisor(s), host laboratory							
Name(s) of the report recipient(s)							
Period of the research project							
Other relevant information							
Main parts of the scientific report							
Compliance with instructions							
Abstract and key words							
Introduction and context							
Materials and methods							
Results							
Discussion							
Conclusion							
References							
	0 to 4	**5 to 7**	**8 to 9**	**10**	**11 to 12**	**13 to 15**	**16 to 20**
Evaluation							

UNIVERSITÉ CÔTE D'AZUR | ÉCOLE UNIVERSITAIRE DE RECHERCHE SYSTÈMES NUMÉRIQUES POUR L'HUMAIN

Projet de recherche – Grille d'évaluation

Student Research Project Evaluation grid

Soutenance orale finale

Final Oral Presentation

(29,5% de la note finale / of the total final grade)

Date	
Student's Name	
DS4H Jury Grade	/ 20
Program Responsible Grade	/ 20
Final Grade	**/ 20**

Appreciation

Key strengths	
Quality to maintain	
Areas to develop	

Soutenance orale finale Final Oral Presentation	*Insufficient*	*Weak*	*Rather Weak*	*Average*	*Pretty good*	*Good*	*Excellent*
Speaking skills in general							
Good time management							
Enthusiasm of the speaker							
Well-supported thesis							
Consideration for the audience							
Effective delivery and transitions							
Structure							
Presentation of a pertinent outline							
Compliance with the required structure							
Media							
Content of slides							
Creativity							
List of references							
Scientific content							
Quality of the presentation of the topic (context / state of the art)							
Relevance of the method(s) chosen to address the topic							
Quality of the presentation of results, quality of the description (visuals: graphs, photos, articles, etc)							
Quality of the discussion							
Quality of the conclusion							
Questions							
Enthusiasm, Curiosity							
Quality of the intellectual process leading to the answer							
Pertinent answers							
Competency in holding a scientific discussion							
	0 to 4	**5 to 7**	**8 to 9**	**10**	**11 to 12**	**13 to 15**	**16 to 20**
Evaluation							

UNIVERSITÉ CÔTE D'AZUR | ÉCOLE UNIVERSITAIRE DE RECHERCHE SYSTÈMES NUMÉRIQUES POUR L'HUMAIN

Projet de recherche – Grille d'évaluation

Student Research Project Evaluation grid

Essai réflexif

Reflexive Essay

(3,5% de la note finale / of the total final grade)

Date	
Student's Name	
DS4H Grade	**/ 20**
Appreciation	
Key strengths	
Quality to maintain	
Areas to develop	

Essai réflexif Reflexive Essay	***Insufficient***	***Weak***	***Rather Weak***	***Average***	***Pretty good***	***Good***	***Excellent***
Compliance with instructions							
Introduction Informative, brief and catchy							
Structured Body How the experience has affected you							
Conclusion							
	0 to 4	**5 to 7**	**8 to 9**	**10**	**11 to 12**	**13 to 15**	**16 to 20**
Evaluation							

UNIVERSITÉ CÔTE D'AZUR | ÉCOLE UNIVERSITAIRE DE RECHERCHE SYSTÈMES NUMÉRIQUES POUR L'HUMAIN

Projet de recherche – Grille d'évaluation

Student Research Project Evaluation grid

Evaluation de l'encadrant

Supervisor's evaluation

(25,5% de la note finale / of the total final grade)

Date	
Student's Name	
Supervisor Grade	**/ 20**
Appreciation	
Key strengths	
Quality to maintain	
Areas to develop	

Evaluation de l'encadrant Supervisor's evaluation	***Insufficient***	***Weak***	***Rather Weak***	***Average***	***Pretty good***	***Good***	***Excellent***
Student overall participation in the project							
Attitude in general							
Communication with supervisor							
Communication with the researchers in laboratory							
Initiative autonomy							
Completed tasks defined with supervisor							
Attendance at research project meetings and appointments							
Quality of work performed (excluding the final report and excluding the final oral defense)							
Overall reasoning, interest and curiosity for the project							
Identification of relevant issues							
Bibliographic research work							
Scientific viewpoint							
	0 to 4	**5 to 7**	**8 to 9**	**10**	**11 to 12**	**13 to 15**	**16 to 20**
Evaluation							